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Entomological News

Fenisoca tarquinius
Chrysalis (enlarged)

JANUARY, 1899.

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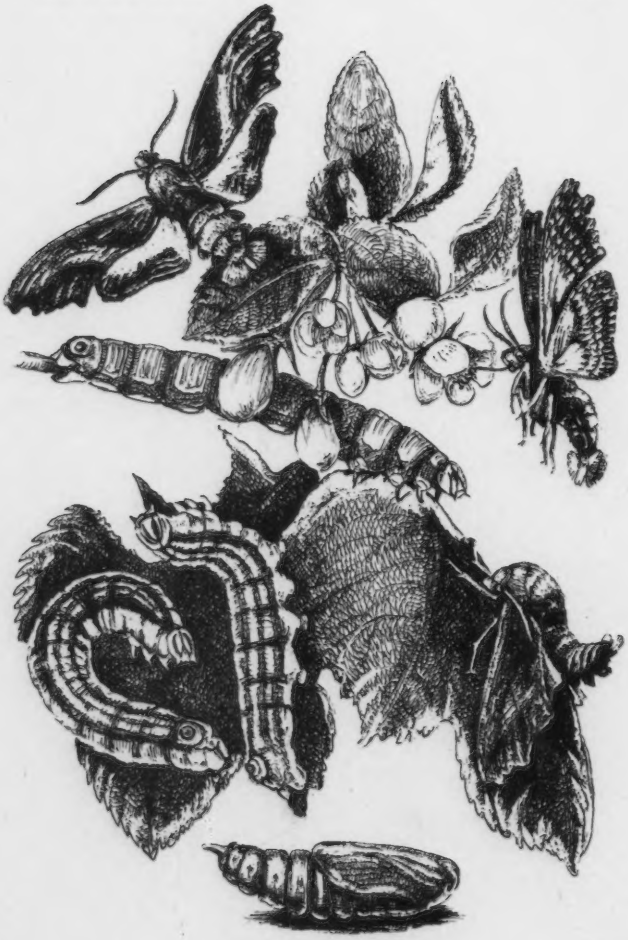

Thyreus Abbottii. (Sw.)
Pupa food, Grape.

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. X. JANUARY, 1899. No. 1.

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THYREUS ABBOTII (Swains).

Our illustration of this curious Sphinx moth was made from a pen and ink sketch drawn many years ago by Titian R. Peale. The larvæ feeds upon species of *Vitis* and *Ampelopsis*. The distribution of the species is Canada, eastern United States, westward to Iowa.

NOTES ON CELITHEMIS FASCIATA (Odonata); With a Short Description of the Female.

By J. S. HINE, Columbus, Ohio.

Very little has appeared in literature regarding *Celithemis fasciata*. Within the last two years I have seen no less than a dozen specimens of the species, and during the past summer I had the pleasure of observing in the field and collecting half that number near Akron, Ohio. To my knowledge the female has never been described, so I give below a short description of that sex.

Mature Female.—Head with vertex and dorsal edge of frons dark shining brown, with a violet tinge from some views; eyes, antennæ, mandibles and distal edges of labrum and labium dark; other parts yellow. Thorax yellow with a wide median, a humeral and some

side blotches dark; legs black; fore wings hyaline with the following dark; a regular, transverse band before the apex, an irregular blotch on the costal half between the pterostigma and the nodus, and a patch extending from near the base to the nodus, occupying a third or more of the width of the wing. This latter is divided longitudinally from its base for at least two-thirds of its length,

Right wings of six specimens of *Celithemis fasciata*

and touches the costa at its distal extremity only. The hind wings have the same pattern as the fore wings, but the apical band is wider, and consequently the hyaline space at the extreme apex is smaller. There are two isolated spots, one behind the apex and the other behind the base of the basal patch, which, on this wing, extends clear to the base, where it sends back a triangular projection. Abdomen black, slightly pruinose, with a small dorsal patch on 2, a larger, nearly triangular one on each of 3, 4, 5 and 6, and a small one on 7, yellow. Length of abdomen, 21; hind wings, 28 mm.

Teneral Female.—This specimen differs from the other female, 1st, in the coloration of the hind wing. Instead of the isolated spot behind the apex of the basal patch, the inferior angle of that patch is produced without interruption. The other isolated spot is reduced and appears as two small dots. 2nd, the abdomen shows yellow markings laterally and ventrally. Laterally these markings appear as patches on segments 1 to 6. Length of abdomen, 20; hind wing, 27 mm.

The species has the same habits in the field as *elisa* or *eponina*. It flies very nervously over the water before you for a moment, and then with a sudden turn vanishes from sight. In the

after part of the day they may be found resting on the tips of reeds or sticks in the vicinity of water. When the collector approaches they flit away, but in case no effort is made to capture them they come to rest again on the same perch. I have seen an individual duplicate this performance no less than four times.

I have before me at the present time four specimens from Akron, Ohio, taken by myself on June 23 and July 20, 1898; and two specimens from Indiana, taken by E. B. Williamson. Chas. Dury has taken the species at Cincinnati, Ohio.

The accompanying drawings will explain themselves. They represent the right wings of six different specimens. I made them to show the variation in the outline of the dark markings. I have never seen two specimens exactly alike in this respect.

THE BEES OF KANSAS.

By T. D. A. Cockerell, N. M. Agr. Exp. Sta.

The bee fauna of New Mexico and Illinois are fairly well known, and have very few species in common. It is interesting to ask, where do the eastern types find their extreme western limit, and at what points do they give way to those of the West and South? With these questions in mind, any information about the bee-fauna of Kansas is particularly welcome; and I have been very glad to learn from Mr. J. C. Bridwell, of Baldwin, that he is about to make a study of the bees of his region.

Baldwin is in Douglas county, at the eastern end of the State. A box of bees collected at that place has just been received from Mr. Bridwell, and the species, so far as I have determined them, are the following:

Bombus virginicus, Oliv., *B. separatus*, Cress., *B. pennsylvanicus*, Deg., *Anthophora abrupta*, Say, *Synhalonia frater*, Cress., *Melissodes bimaculata*, Lep., *M. obliqua*, Say, *M. perplexa*, Cress., *Epeolus bifasciatus*, Cress., *Calliopsis andrenifornis*, Smith, *Protandrena cockerelli*, Dunning, *Prosapis pygmæa*, Cress., *Sphecodes mandibularis*, Cress., *Augochlora humeralis*, Patton, *A. viridula*, Smith, *A. similis*, Rob., *A. confusa*, Rob., *Halictus parallelus*, Say, *H. ligatus*, Say, *H. fasciatus*, Nyl., *Andrena mariæ*, Rob., *A. erythrogastra*, Ashm., *A. vicina*, Smith, *A. salicinella*,

Ckll., *A. geranii*, Rob., *A. claytoniæ*, Rob., *A. say*, Rob., and also an *Halictus* which might be *forbesi*, Rob., but for its dark wings.

This list shows that the Baldwin bee-fauna is essentially the same as that of Southern Illinois. There are two western types only: *Andrena salicinella*, hitherto only known from New Mexico, and the *Protandrena*, a Kansas species of a western genus. It is to be remarked that Mr. Baldwin sends both sexes of *Protandrena cockerelli*, the species being hitherto known only by a single ♀ from Topeka. The ♂ is practically identical with that of *P. asclepiadis*, Ckll., of which the is ♀ unknown; but it does not necessarily follow that *cockerelli* is a synonym of *asclepiadis*, since *mexicanorum*, the ♀ of which is quite distinct from *cockerelli*, has also a nearly identical ♂.

It is worth while to remark that *Andrena claytoniæ* is so like *A. hippotes* that they would certainly be confused by one not specially looking for the differential marks, the best of which is in the shape of the process of the labrum.

From Northwestern Kansas we have a list of bees collected by Dr. Williston, and recorded by Mr. Patton in Bull. U. S. Geol. Surv., Vol. V. The species are *Colletes armata*, Patt., *Augochlora humeralis*, Patt., *Nomia nortoni*, Cress., *Halictus parallelus*, Say (*occidentalis*, Cress.), *Calliopsis coloradensis*, Cress., *Epeolus occidentalis*, Cress., *Nomada texana*, Cress., *Bombus pennsylvanicus*, Deg., *B. scutellaris*, Cress. This is a mixture of Eastern and Colorado types.

From Barber county, in Southern Central Kansas, bordering on Oklahoma, we have a list of species collected by Prof. Cragin, published in Bull. Washburn College Lab. of Nat. Hist. (1885). The species are *Bombus pennsylvanicus*, Deg., *B. scutellaris*, Cress., *Anthophora occidentalis*, Cress., *A. smithii*, Cress., *Synhalonia albata*, Cress., *Melissodes menuacha*, Cress., *M. atripes*, Cress., *Centris lanosa*, Cress., *Melecta interrupta*, Cress., *Nomia nortoni*, Cress., *Agapostemon radiatus*, Say (*tricolor Lep.*), *Augochlora viridula*, Sm. (*lucidula*, Sm.), *Pseudopanurgus æthiops*, Cress.

This list is very different from the others, and nearly agrees with the fauna of Central Texas. The *Centris* is quite a Mexican type. There are other Kansas bee-records, but without precise localities, so it is not worth while to enumerate them.

RECOLLECTIONS OF OLD COLLECTING GROUNDS.

By H. F. WICKHAM, Iowa City, Iowa. .

VII.—The Vicinity of Colorado Springs.

Two years ago, in company with my wife and a friend, I spent a few weeks in the mountains of Colorado. Our first stop was made at Colorado Springs, which we reached on the fifteenth of June, apparently in the very height of the collecting season.

The town lies on the extreme eastern edge of the Rocky Mountain region proper, in a rolling piece of country broken by many small hills which rise to the westward until they are lost in the grander heights of the Cheyenne Mountains and the numerous summits which surround the snow-covered apex of Pike's Peak. The lower levels are covered with the characteristic weeds and shrubs of the arid plains, while at a height of two or three hundred feet above the creek the scrub oaks put in an appearance. The numerous canons which open from the hills support an almost entirely different class of plants, the oaks becoming more plentiful and being intermixed with numerous conifers and flowering shrubs. These shrubs often extend out of the mouths of the canons along the courses of the little creeks, and in consequence the accompanying insect-fauna which we might otherwise consider as being confined to the mountain ranges is carried out some distance on to the adjacent plain.

The altitude of Colorado Springs is approximately 6,000 feet. But since it is the most favored summer resort in the State and much frequented by a class of health and pleasure seekers, business enterprise has resulted in the construction of railroads or electric lines to many points of interest in the vicinity which would otherwise be difficult of access without the expenditure of considerable time. Thus it is easy to visit the Garden of the Gods, the canons in the Cheyenne Mountains and those near Manitou without any great exertion. Some of these are very rich in insects, particularly Williams' Cañon, which lies close to Manitou. The railroad to the summit of Pike's Peak offers a smooth walk for the pedestrian, but the results of our high altitude collecting here, by no means encourage a recommendation to others.

While not wishing to present a complete list of our captures

here, it seems worth while to mention some of the most striking characteristics of the coleopterous fauna, particularly since the region is one likely to be visited by any transcontinental traveler. By a perusal of the following notes some idea of the character of the beetles obtained may be secured.

The only *Cicindela* seen in June was *C. repanda*, which was common along the creek in the north Cheyenne cañon. In July I took some *C. punctulata* on muddy flats in fields near the Rock Island railroad tracks; they were hardly typical, but approximated the variety *micans* very closely. A single example of *venusta* was taken during this month, running along a sandy road.

Among the Carabidæ we met with comparatively few species, and the genera *Nebria*, *Notiophilus*, *Dyschirius* and *Clivina*, all of which we expected to see, were quite absent. Many *Pasimachus elongatus* were found in the sandy soil beneath ties along the Rock Island tracks, but none occurred elsewhere, with the single exception of a specimen from the north Cheyenne cañon. *Bembidium lugubre* and *B. bimaculatum* were both rather abundant along small streams, particularly in Williams' Cañon, where we also found an example of *Carabus serratus*. *B. bifossulatum*, *consimile* and *versicolor* were rather common on a small saline mud-flat near the town. *Pterostichus incisus* occurred with *Pasimachus* in moderate numbers; sometimes it was also accompanied by *P. luczotii*, which, however, was more common in the damp cañons. *Dicælus sculptilis* was captured under stones in sheltered spots in Williams' and Cheyenne cañons. About roots of plants we scratched up *Cymindis planipennis*, *Philophuga amœna* and *Blechrus nigrinus*, with an occasional *Piosoma setosum*, though this last species is quite as frequently seen under boards in open spaces, in company with *Nothopus zabroides*.

Dytiscidæ were not very abundant, and we could find none whatever in the little stream which is followed by the Pike's Peak road. However, we got a fine lot of *Agabus cordatus* in a rill which runs through Williams' Cañon. This species is easily taken by lifting up small stones, under which it hides; and, being by no means agile, capture readily follows detection. *A. lugens*, two species of *Hydroporus* and a *Cœlambus* accompanied it. *Dryops striatus* was very abundant. *Rhantus*

binotatus was once taken in some numbers in a small muddy pool among the low hills near the town.

Of the clavicorn beetles only a few seem to require mention. *Silpha ramosa, truncata* and *lapponica* were met with on carrion. *Batrisus frontalis* occurred under ties along the railroad track. *Exochomus marginipennis* and its variety *æthiops* was beaten from sage-brush, *Epilachna corrupta* was swept from plants on low ground. *Hyperaspis 4-vittata* was not rare, being scratched up from about the roots of plants. A very pretty little insect which I have referred with some doubt to *Hyperaspidius trimaculatus* was secured in abundance on cacti, where they evidently feed on the Aphides which infest these plants so badly. *Erotylus boisduvalii* was seen quite frequently in the canons, usually resting on the under sides of pine logs. Some few *Languria lecontei* were found in low meadows. *Carpophilus brachypterus* was very abundant on cactus blossoms.

Buprestidæ were not very common as a rule. However, in Cheyenne Cañon we took *Buprestis maculiventris* and *Chrysobothris trinervia* on pine logs, *Agrilus anxius* on poplar, and *Anthaxia æneogaster* on flowers. In Williams' Cañon *Acmæodera pulchella* was extremely abundant on flowers in July, while with it occurred *A. sparsa* in much smaller numbers. *Rhyncheros sanguinipennis* frequented the same situations. *Collops bipunctatus* was plentiful on low plants in damp spots near the town. *Trichodes ornatus* was partial to flowers on the higher altitudes, while *Clerus abruptus* occurred mostly on plants in the arid districts.

In the Garden of the Gods *Euphoria kernii* was found in some numbers on flowers of *Argemone mexicana*. A single *E. fulgida* was taken at the mouth of the Cheyenne Cañon, while *Trichius affinis* was abundant on flowers of shrubs above the Seven Falls, a few occurring also in Bear Creek and William's Cañons.

The Cerambycidæ were hardly as plentiful as one would expect. *Batyle suturalis* and *ignicollis* both occurred on thistle and other blossoms rather commonly, chiefly in the hills about town. *Leptura chrysocoma* and *L. sanguinea* were found along the Pike's Peak road above Manitou. *Acmæops longicornis* was occasionally seen on flowers near Bear Creek. *Monohammus scutellatus* and *Xylotrechus undulatus* were taken from

pine logs in Cheyenne Cañon, while *Monilema annulatum* was obtained in small numbers on cacti.

Chrysomelidæ were very abundant. *Euryscopa lecontei* was beaten from scrub oak, in company with *Coscinoptera dominicana*. *C. axillaris* was very plentiful on various low plants, in company with the much less abundant *C. vittigera*. The other members of the family must mostly be passed over without notice; but it seems worth while to record the capture, near the town, of numbers of *Microrhopala cyanea*, varying from blue to green, and well up in Williams's Cañon we found a few *Odontota collaris* on grass blades. The Tenebrionidæ offer little of interest, most of the species taken having been found under ties along the railroads. Mention may be made of *Asida opaca*, *A. polita*, *Eleodes extricata*, *obsoleta*, *tricostata*, *longicollis*, *lecontei* and *nigrina*, and *Embaphion muricatum*. *Melæ sublævis* was taken in considerable numbers on a sandy flat inside the city limits, crawling about during the morning hours. *Zonitis bilineata* was found rather rarely on composites in July.

Rhynchophora were abundant in individuals; no sweeping could be done in patches of weeds on low ground without yielding some of the forms belonging near *Smicronyx*. On various flowers *Rhynchites eximius* occurred in great numbers, being one of the very commonest insects during June, though much rarer in July. I never met with this beautiful weevil at any other point, and it seems quite uncommon in collections, in spite of this wonderful local abundance.

A NEW SPECIES OF NOMOTETTIX FROM KANSAS.

By Dr. J. L. Hancock.

Among some Tettigidæ kindly sent to me by Prof. Hugo Kahl, of the Kansas University, I find an example of a species of *Nomotettix* which is not referable to any described species. I append the following brief description, pending the appearance of a more extensive paper on the whole group, which will contain a figure of this species.

Nomotettix acuminatus, sp. nov.

Similar to *N. parvus*, differing as follows: Larger stature, including relative proportions of body, vertex from above more acute-angulate, the mammillæ of occiput more distinct, the anterior margin of dorsum a little more produced over the head. Wings posteriorly reach slightly beyond the apical process. From *cristatus* it is distinguished by the more slender form of the body, besides having the median carina of the pronotum less arched longitudinally.

Length of ♀, 9 mm.; pronotum, 8; hind femora, 5; antenna, 7.5. Locality, Lawrence, Kan. Prof. Hugo Kahl.

Four New Entomophilous Wasps.

By William H. Ashmead.

PISONOPSIS Fox.

(1) **Pisonopsis triangularis,** n. sp.

♀.—Length 6 mm. Stature of *Bothynostethus distinctus* Fox. Black, closely, opaquely punctate. Ocelli arranged almost in an equilateral triangle. Eyes slightly convergent above, with a median emargination within, but not deeply emarginated, as in *Pison*. Clypeus with a median triangular production Mandibles beneath strongly emarginate at basal third and rufous from the emargination to apex. Metathorax rugulose, with a median furrow and a delicate carina, the furrow lineated on either side from the carina. Wings subhyaline, the tegulæ, stigma and veins brown-black; the submedian cell is distinctly shorter than the median; the first recurrent nervure is interstitial with the first transverse cubitus, while the second recurrent joins the second submarginal cell at its apical fourth. Abdomen distinctly punctate, the dorsal segments 1-4 broadly depressed at apex and clothed with a silvery or at least glittery pubescence, especially noticeable laterally; ventral segments 2-5 narrowly testaceous at apex and finely, closely punctate. Longer spur of hind tibiæ nearly as long as the basal joint of tarsi.

Hab —Colorado. Carl F. Baker Collection, No. 2061.

Type, No. 5064, U. S. N. M.

NITELIOPSIS Saunders.

(2) **Niteliopsis striatipes,** n. sp.

♀.—Length 6.5 mm. Head and thorax black, finely, closely, cribrately punctate, the face, temples, pronotum and pleura with a silvery pubescence; abdomen rufous; legs black, the tarsi more or less rufous, brownish at base, while all the tibiæ have a white stripe outwardly. The clypeus is strongly produced medially and again produced medially into a quadrate production. Wings hyaline, broadly fuscous at apical margins; the second submarginal cell receives both recurrent nervures; while the submedian and median cells are nearly of an equal length.

Hab -California. Carl F. Baker Collection, No. 2375.

Type, No. 5065. U. S. N. M.

HARPACTUS Jarine.

(3) **Harpactus howardi.** n. sp.

♀.—Length 5.5 mm. Head and thorax black; abdomen rufous, smooth, impunctate; inner orbits from base of clypeus and narrowed above to beyond the middle of face, the anterior margin of the clypeus, the scape beneath, a stripe on the front tibiæ anteriorly and a slight line on middle tibiæ near the base, yellow; mandibles, except apex, black. The metathorax has a distinct triangular area at base, which is smooth except some lineations at extreme base. Wings hyaline the stigma and veins brown-black; the submedian cell is

much longer than the median; both recurrent nervures join the second submarginal cell, the first at the middle, the second *before* the middle, of its apical half.

Hab.—Claremont, Cal. Collected April 18, 1898, by Dr. L. O. Howard.

Type, No. 5070, U. S. N. M.

(4) **Harpactus cockerelli**, n sp.

♀.—Length 5 mm. Head and thorax black, but clothed with a short whitish or silvery pubescence, and giving the insect a very hoary appearance; inner orbits narrowly anteriorly, the anterior margin of clypeus the palpi, the mandibles basally, the antennæ except the scape, pedicel and first three or four joints of flagellum above, the tegulæ, knees, tibiæ at base, the anterior and middle tibiæ in front, and more or less of the tarsi, honey-yellow or pale ferrugin ous. Wings hyaline, the costa and stigma brown black, the internal veins paler: the venation agrees with *H. howardi*, except that the second recurrent nervure joins the second submarginal cell *at the middle* of its apical half. Abdomen rufous, the dorsal segments rather broadly ma gined with a whitish or silvery pubescence at apex.

Hab.—Mesilla Park, N. M. Collected June 9, 1898, by Prof. T. D. A. Cockerell.

Type, No. 5071, U S. N. M.

NOTES OF MISSOURI SPHINGIDAE.

By R. R. Rowley, Louisiana, Mo.

Of the genus *Philampelus*, *achemon* is our commonest species, and may be said to be fairly plentiful most years. The larva is much like that of *pandorus*, but may be known by the oblong instead of round, lateral yellow spots. Both want the caudal horn at maturity and are remarkable for their short, thick appearance at rest, the head being withdrawn into the swollen thoracic segments. Both feed on grape and woodbine.

Of five larvæ of *achemon* taken September 30, 1897, two had a light pea-green ground color; two, smoky, yellowish brown and one a deep reddish brown. The young larvæ of *Philampelus* have long, slender caudal horns that curve toward the head like a dog's tail, but only a polished wart at maturity. Both species mentioned above are double-brooded and the August imagoes of *pandorus* have rosy patches on the hind margins of both wings, as I have seen in Mr. O. C. Poling's collection. I have found the larvæ of *pandorus* rare, but have taken more imagoes at light than *achemon*. Mr. Poling has informed me

that he obtained during the past summer a goodly number of the former on wild grape.

P. vitis is unknown to me, but may be looked for in southern Missouri.

Although a number of weeds are given as the food plants of *Deilephila lineata*, I have never found the larva on anything but purslane; have taken the moth at flowers at mid-day as well as at dusk.

D. chamaenerii is probably not found here, though its food plants are abundant.

The larva of *Hyloicus plebeius* feeds on trumpet creeper and lilac, but I have not found it common. Have taken the imago at light. Mr. Poling finds some noticeable variation in the moths.

I captured a beautiful apparently fresh imago of *Dilophonota ello* on the railway station at Mexico, Mo., October 10, 1897. It had the appearance of a home-bred moth. Could this insect have flown from the tropics to Missouri without disturbing the scales on its wings?

Dolba hylæus is one of our commonest hawks. The larva feeds on paw-paw and the species is probably double-brooded. The color lines that shade the sphingial bands are very bright, especially on the young larva. The little pupa is much like that of the genus *Sphinx*, and larva and pupa alike closely ally this hawk to *plebeius*.

Two specimens of *Sphinx eremitus* have been taken at flowers by Mr. Poling, but we have searched the mints in vain for the larvæ.

Sphinx gordius is a rare species with us. I have not taken the larva, but Mr. Sweet has a record of several found feeding on apple.

Sphinx chersis, as well as *S. drupiferarum*, are uncommon in eastern Missouri. Mr. Sweet found the larva of the former on ash and the latter on apple and plum.

S. kalmiæ is another probable member of our *Sphinx* fauna, but larva and imago alike are unknown to the writer. Search for the larva on ash and lilac.

Of the *Macrosilas, carolina* is most abundant. I have found the larva feeding on tobacco, tomato, red pepper, ground cherry, potato, jimson weed and matrimony vine. *M. celeus*

is less common. Have found the larva on tomato and potato. I have neither taken the larva nor imago of *M. cingulata* in Missouri, though I found it a common hawk at Fort Smith, Ark.

The pupa is easily distinguished by its doubly-curved tongue case, so unlike that of *celeus* or *carolina*.

Mr. Otho C. Poling has taken *cingulata* at Quincy, Illinois, and thinks it feeds on a solnaceous plant. Search for the larva on convolvulus plants (sweet potato, bind-weed, morning glory, etc).

Out of twenty larvæ, September, 1897, I obtained but one pupa of *M. carolina*. Nineteen of them were parasitized. I have found dark brown larvæ of *M. carolina* only on jimson.

Daremma undulosa is common about Curryville, and Mr. Poling has found the larvæ plentiful at Quincy.

I have found the larvæ on ash in August. There is much variation of color in the caterpillars. The moth looks not unlike *Ceratomia amyntor*, but some large males have a faint grayish green tinge that gives a handsome appearance to the fly. The larvæ of *Ceratomia amyntor* are quite common some years. Unlike the larvæ of other hawks, they have four fleshy horns behind the head. The whole larva has a rough, granular appearance, in perfect harmony with the harsh, toothed foliage on which it feeds. Mr. Ralph Sweet took quite half a hundred larvæ of *amyntor*, one September, from a single elm tree.

Of *Thyreus abbotii* I have seen but one larva taken on grape. It is probably common, though I have not found it so. Mr. Poling showed me a number of pupæ of *abbotii* from larvæ taken at Quincy. The larva of *Thyreus* has no caudal horn.

Ællopos titan and *Amphion nessus*, as well as *Lepisesia flavofasciata*, may be sought at early flowers, as serviceberry and lilac. They fly at mid-day and are early spring species. I have seen no one of them in Missouri.

Hemaris tenuis, if it be a good species, is probably an inhabitant of Missouri. The writer has taken a moth at flowers in April that answers to the description of this hawk. *H. diffinis* is very common. I have taken the fly at horsemint flowers in May and thistle blooms in August. The larva feeds on buckberry, snowberry and feverwort. *H. thysbe*, like *diffinis*, hovers over early flowers and thistle blooms in the hot sunshine in August. Both *diffinis* and *thysbe* are double-brooded.

The larva of *thysbe* is common on black-haw and snow-ball, and may be known by the toothed yellow collar behind the head.

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfully receive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and, as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer for each number three weeks before date of issue. This should be remembered in sending special or important matter for a certain issue. Twenty-five "extras," without change in form, will be given free, when they are wanted; and this should be so stated on the MS., along with the number desired. The receipt of all papers will be acknowledged.—ED.

PHILADELPHIA, PA., JANUARY, 1899.

THE NEWS is ten years old, or, rather, is entering its tenth year. Since THE NEWS entered on its career there have been many changes. Since our first number, of sixteen pages appeared, Entomology has wonderfully advanced; more persons are interested; it is largely taught in our schools and colleges; economic Entomology is recognized as a valuable study. A number of our valuable workers have joined the silent majority, but let us hope that their places may be filled by others just as enthusiastic, industrious and able. We are not infrequently confronted with the criticism that the subject has lost its poetry and the delicate touch of Nature has been swept away, and, in its place, there is left a dreary list of scientific names, whose meaning can only be known to a favored few, with large scientific libraries at their elbow We try to remedy this in THE NEWS, but receive no help from the critics; they talk, but do not act. We admit that descriptions of new species are as dry as the dust under an infested specimen; but we owe more to the systematic worker than to the growler, who proclaims from the housetops what should be, but has never put pen to paper. One good friend says we should give less space to "duns" for subscription money and devote the space to original entomological observations, and charge two dollars for THE NEWS. When we lie awake half the night devising means to get the one dollar due us, could we be expected to stay up all night trying to get two? Dollars with some entomologists seem to be as scarce as the males of *Pelecinus polycerator*.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

THE NEW PEACH MITE IN OHIO.—Apropos to the statement of Prof. W. G. Johnson, in the December, 1898, number of ENTOMOLOGICAL NEWS, regarding the occurrence of this pest in Maryland, I will say that in August, 1898, my assistant, Mr. C. W. Mally while inspecting two nurseries in this State, found the injury so characteristically described by Prof. Johnson, but was not able at the time to determine the nature of the depredator, and for want of time the matter was not followed further. In one very extensive nursery the damage was quite serious, the greater portion of a block of upwards of 500,000 young peach trees showing more or less of the effects of the insect. I may add that the two affected nurseries were located near to or south of lat. 40 degrees north.—F. M. WEBSTER.

THE new synonymic catalogue of North American butterflies, by Dr. Henry Skinner, is now ready. See advertisement on cover.

OWING to the fact that we have placed THE NEWS with another printing establishment, not familiar with scientific work, it is unavoidably late. We will depend on our printer to do better in the future. EDITORS.

MORDELLIDÆ NOTES.—Having occasion to overhaul my Mordellidæ brings a few memoranda that may be of interest. From Prescott, Arizona, I have examples of a species of *Pentaria*, which seems undoubtedly to be *decolor* Champ., as described in "Biologia," vol. iv, pt. 2, p. 256.

A specimen from Vera Cruz, which seems to fit the description of *Pentaria brevicornis* Champ., I cannot distinguish from my numerous specimens of *fuscula* Lec from Colo. and N. Mex.; the possibility of such identity is spoken of by Mr. Champion (p. 254), but my one specimen does not enable me to do more than partially confirm this suspicion. A fine example of *Tomoxia hilaris* Say, is among my (Vera Cruz) specimens.

Mr. Champion gives one distinction (p. 272) between *Mordella melæna* Germ. and *scutellaris* Fab. which is not mentioned by Smith in his Mordellidæ, vol. 10, Trans. Am. Ent. Soc., p. 82, *i. e.*, *melæna* "differs from *scutellaris* by its short clavate antennæ." I find it much the easiest character for separating species. *Mordella serval*, Say, seems rather a northern species—I have one pair from Salisbury, Vt., another pair from the subalpine region of Mt. Washington, N. H., and one specimen from Brookline, Mass.

Among the material sent me by Mr. Wickham from Brownsville, Texas (289), is a single specimen of an interesting new species of *Mordella*, which seems to come near *tenuipes* Champ.; also (298) one example of a minute new species of *Mordellistena* near *pulicaria* Champ.—FRED. C. BOWDITCH.

Entomological Literature.

COMPILED BY P. P. CALVERT.

Under the above head it is intended to note such papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology will not be noted. Contributions to the anatomy, physiology and embryology of insects, however, whether relating to American or exotic species, will be recorded. The numbers in HEAVY-FACED TYPE refer to the journals, as numbered in the following list, in which the papers are published; * denotes that the paper in question contains descriptions of new North American forms. Titles of all articles in foreign languages are translated into English; usually such articles are written in the same language as the title of the journal containing them, but when such articles are in other languages than English, French, German or Italian, this fact is indicated in parenthesis.

5. Psyche, Cambridge, Mass., Dec., '98.—**7.** U.S. Department of Agriculture, Division of Entomology, Washington; Bulletin 17, new series, '98.—**15.** Biologia Centrali-Americana, London, part cxliv, Oct., '98.—**19.** Horæ Societatis Entomologicæ Rossicæ, St Petersburg, '98,—**41.** Entomologische Nachrichten Berlin, Nov., '98.—**49.** Termeszetrajzi Füzetek, xxi., Budapest, Oct, 1, '98.—**50.** Proceedings, United States National Museum, Washington, '98.—**56.** Mittheilungen, schweizerischen entomologischen Gesellschaft, x, 4. Schaffhausen, Oct., '98.—**58.** Revista Chilena de Historia Natural, ii, 9. Valparaiso, Sept., '98.—**87.** Revue Scientifique, Paris, '98.—**97.** Zeitschrift für wissenschaftliche Zoologie, lxv, 1. Leipsic, Nov. 15, '98.—**98.** Travaux, Société Imperiale des Naturalistes de St. Petersbourg.

The General Subject—Anon. White wax of insects, **87** Nov. 19.—Bethe, A. A comparative study of the functions of the central nervous system of Arthropods (transl. by W. W. Norman), Journal of Comparative Neurology, viii. 3, Granville, O., Nov., '98.—Cockerell, T. D. A. Entomological Ethics, **7**.—Distant, W. L. Biological suggestions: Assimilative colouration, ii, Zoologist, London, Nov., '98.—Doran, E. W. Vernacular names of insects, **7**.—Heymons, R. [Notice of] Packard's Text Book of Entomology, Zoologisches Caentrlblatt, Leipzig, Nov. 17, '98.—Knuth, P. Handbuch der Blütenbiologie. II Band: die bishea in Europa und im arktischen Gebiet gemachten blütenbiologischen Beobachtungen 1. Teil: Ranunculaceæ bis Compositæ. Leipzig, Engelmann. 1898. 8vo. 210 figs.—Meunier, F. The insects of secondary times, 30 pls. Archives du Musée Teyler (2) vi, 2. Haarlem, '98.—Rane, F. W. Notes on the fertilization of muskmelons by insects, **7**.

Economic Entomology.—Anon. Flies and typhoid fever [in American camps in Cuba], **87**, Nov. 19.—Anon. A new tobacco juice insecticide, Journal Société des Aviculteurs Français, Paris, Oct., '98.—Blandford, W. F. H. *Xyleborus morigerus*, figs., Gardener's Chronicle, London, Nov. 26, '98,—Britton, W. E. The San José scale in Connecticut, **7**.—Chittenden, F. H. Insect injury to millet, **7**.—Cooley, R. A. Notes on some Massachusetts Coccidæ, **7**.—Felt, E. P. Notes on some o

the insects of the year in the State of New York, 7.—Fernald, C. H. The brown-tail moth (*Euproctis chrysorrhœa*, L), 7.—Forbush, E. H. Recent work of the Gipsy-moth Commission, 7.—Grassi, B. Malaria propagated by means of special insects, Atti d. Reale Accademia dei Lincei, Rome, Nov. 6, '98.—Hopkins, A. D. Some notes on observations in West Virginia, 7.—Howard, L. O. Two beneficial insects introduced from Europe, figs. 7; Notes on house flies and mosquitoes, 7; *Pulvinaria acericola* (W. & R.) and *P. innumerabilis*, Rathv., figs., 7.—Johnson, W. G. Hydrocyanic acid gas as a remedy for the San José scale and other insects, 7; Notes from Maryland on the principal injurious insects of the year, 7.—Kanthack, A. A., Durham, H. E., and Blandford, W. F. H. On nagana or tsetse fly disease. Report made to the Tsetse fly Committee of the Royal Society, of observations and experiments carried out from November, 1896, to August, 1898. Proceedings, Royal Society, lxiv, 404, London, Nov 19, '98.—Kenyon, F. C. Abstracts of recent publications, Experiment Station Record, x, 3, '98, 7.—Marlatt, C. Proceedings of the tenth annual meeting of the Association of Economic Entomologists, Aug 19 and 20, 1898, 7; Notes on insecticides, 7.—Osborn, H. The duty of Economic Entomology, 7.—Quaintance, A. L. A preliminary report upon the insect enemies of tobacco in Florida, figs., Bulletin 48, Florida Agric. Experiment Station, Deland, Fla., Oct., '98.—Sch, S. The tsetse-fly, Insekten Borse, Leipsic, Nov. 24, '98: A new means against phylloxera, Naturwissenschaftliche Wochenschrift, Berlin, Nov. 27, '98.—Smith, J. B. The distribution of the San José or pernicious scale in New Jersey, 7.—Webster, F. M. The Chinch Bug: its probable origin and diffusion, its habits and development, natural checks and remedial and preventive measures, with mention of the habits of an allied European species, figs. Bulletin No. 15, new series, '98, 7.—Webster, F. M., and Mally, C. W. Insects of the year in Ohio, 7.—Weed, C. M. The feeding habits of the chipping sparrow, figs. Bulletin 55, New Hampshire College Agric. Experiment Station, Durham, N. H., July, '98; Notes on tent-caterpillars, 7.—Weed, C. M., and Fiske, W. F. Notes on pruce bark-beetles, 7.

Arachnida.—Cambridge, O. P. Arachnida Araneidea, pl. xxx, 15.—Schimkewitsch, W. Note on the dorsal organ of the Arancina, **98**, '97, 8, Dec.; On the origin of the alimentary canal in some Arachnids, **98**, '98, 1, Jan.—Schultz, E. On regeneration of the feet of spiders, **98**, '98, 2. Feb.

Myriopoda.—Cook, O. F. American oniscoid Diplopoda of the order Merochaeta,* **50**, no. 1154.

Orthoptera. Burr, M. Aquatic Orthoptera, Entomologists' Record London, Nov. 15, 98.—Hunter, S. J. On the occurrence of *Dissosteira longipennis*, Thomas, [and] *Dissosteira* in

Colorado, **5**.—Hunter, S. J. [and Hough, G. de N.] Parasitic influences on *Melanoplus*, figs. Kansas University Quarterly. vii (A), 4, Lawrence, Oct., '98.—Morse, A. P. Notes on New England Acridiidæ iv, Acridiidæ 5, **5**.—Pictet, A. and deSaussure, H.—Orthoptera,* pp 401-416, **15**.

Neuroptera.—Kohaut, R. Odonata of Hungary, 3 pls,. Kir. Magyar Termeszettudomanyi Tarsulat Megbizasabol, Budapest, '96. [In Magyar.].

Hemiptera.—Alwood, W. B. Notes on the life-history of the wooly aphis of apple (*Schizoneura lanigera*), **7**.—Champion G. C. Rhynchota Heteroptera,* vol. ii, pp. 153-176, pls. ix, x, **15**—Cholodkovsky, N. Contributions to a monograph of the Conifer-lice, ii, 3 pls, **19**, xxxi, 4.—Cockerell, T. D. A. New North American insects,* Annals and Magazine of Natural History, London, Nov., '98.—Cooley, R. A. See Economic Entomology.—King, G. B., and Tinsley, J. D. A new ant-nest Coccid, figs., ***5**.—Reed, E. C. Synopsis of the Hemiptera of Chili (cont.), **58**.—Webster, F. M. See Economic Entomology.

Coleoptera.—Burgess, A. F. An abnormal coccinellid, **7**.—Horn, W. Ten new species of Cicindelidæ. Notes from the Leyden Museum, xx, 2-3, Sept. 98.—v. Kiesenwetter, H. and Seidlitz, G. Coleoptera, V Bd. 1 Hälfte, 5 Lieferung. Naturgeschichte der Insecten Deutschlands begonnen von Dr. W. F. Erichson. Berlin, Nicolaische Verlags-Buchhandlung. '98.—Schoch, G. Supplement VIII to "Genera and species of my Cetonid collection," **56**.—Spaeth, F. Description of some new Cassididæ, with synonymic remarks, Verhandlungen z-b. Gesellschaft in Wien, xlviii, 8. Nov. 17, '98.—Tschitschérine, T. Materials for study of the Feronines, **19**, xxxii, 1-2.—Weed, C. M. and Fiske, W. F. See Economic Entomology.

Diptera.—Hough, G. de N.* See Orthoptera.—K. [Wandolleck on the phylogeny of the flea and on the Stethopathidæ] Naturwissenschaftliche Rundschau, Braunschweig, Nov. 16, '98.—Portschinsky, J. Biology of the coprophagous and necrophagous flies, ii: Studies on *Lucilia bufonivora*, parasitic on anurous Batrachia, figs. [in Russian], **19**, xxxii, 1-2.—Van der Wulp, F. M. Diptera,* vol. ii, pp. 377-384, **15**.—Van der Wulp, F. M. and de Meijere, J. C. H. New check list of the Netherland Diptera (Bijvoegsel tot deel xli, Tijdschrift voor Entomologie). The Hague, '98.—Wagner, J. Aphanipterological studies, 3 pls., **19**, xxxi, 4.

Lepidoptera.—Alwood, W. B. On the life history of *Protoparce carolina*, **7**.—Baer, M. On the structure and colors of the wing-scales of butterflies, **97**.—Bartlett-Calvert, W. Revised Catalogue of the Lepidoptera of Chile (cont.), **58**.—Cockerell, T. D. A. Second note on a new *Hemileuca*, **5**; See Hemiptera.*—Druce, H. Lepidoptera Heterocera, vol. ii, pls.

xcvi, xcvii, 15.—Kennel, J. The destruction of butterflies by birds, Biologisches Centralblatt, Erlangen, Nov. 15, '98.—v. Linden, M. Researches on the development of the markings of the butterfly wing in the pupa, 3 pls., 97, and Illustrierte Zeitschrift für Entomologie, iii, 21. Neudamm, Nov. 1, '98.—Moore, F. Lepidoptera Indica, parts xxxii, xxxiii. London, L. Reeve & Co., '98. (Vol iii, pp. 145-192, pls 247-262.) Rec'd Dec. 13, '98.—Pagenstecher, A. The Lepidoptera of the high mountains, Jahrbucher des Nassauischen vereins für Naturkunde, li, Wiesbaden, '98.—Rippon, R. H. F. Icones Ornithopterorum, part 12 London. Published by the author. 4 pls. Rec'd Dec. 13, '98.—Smith, J. B., and Dyar, H. G. Contributions toward a monograph of the Lepidopterous family Noctuidæ of boreal North America: a Revision of the species of *Acronycta* (Ochsenheimer) and of certain allied genera, 50, no. 1140.—Soule, C. G. A curious cocoon of *Attacus cecropia*, 5; *Callidryas eubule* [in Mass.], 5.

Hymenoptera.—Bethe, A. Psychological studies on bees, 87, Nov. 5.—Cockerell, T. D. A. Arctic and sub-arctic bees, Nature, London, Nov. 24, '98.—F. M. The "sauva" or leaf cutting ant, Naturwissenschaftliche Rundschau, Braunschweig, Nov, 26, '98.—Frey-Gessner, E. Hymenoptera Helvetiæ (cont.), 56.—Howard, L. O. On some new parasitic insects of the subfamily Encyrtinæ,* 50, no. 1142.—Karsch, F. On the etiology of the Ichneumonid genus *Polysphincta* Grav., 41.—Kohl, F. F. New Hymenoptera, 1 pl., 49.—Konow, F. W. On some new Chalagastra species,* 41.—Kriechbaumer, J. Contribution to a monograph of the Joppinæ, a sub-family of the Ichneumonidæ, 2 pls.,* Berliner Entomologische Zeitschrift, xliii, 1 and 2, Nov. '98.—Marshall, T. A. Braconidæ in Species des Hyménoptères d'Europe et d'Algérie fondé par Edmond André et continué sous Ernest André. 64e fascicule. Paris, Vve Dubosclard, Oct. 1, '98. (Tom. V, pp. 225-288, pls. x-xii)—Mocsary, A. New species of the genera *Euglossa* Latr. and *Epicharis* Klug,* (in Latin), 49.—Selwyn, P. H. Honey bees acclimatised, Ottawa Naturalist, Oct. and Nov., '98.—Sundwik, E. E. On the wax of bumble bees (*Bombus* spp.), Hoppe-Seyler's Zeitschrift für physiologische Chemie, xxvi, 1 and 2, Strassburg, '98.

"The Butterfly Book. A Popular Guide to a Knowledge of the Butterflies of North America. By W. J. Holland, Ph D., D.D., LL.D. With 48 plates in color photography. New York. Doubleday & McClure Co." This is a large octavo of 400 pages, and contains chapters on the Life-History and Anatomy of Butterflies; the Capture, Preparation and Preservation of Specimens; the Classification of Butterflies; Books about North American Butterflies. Through the work are interesting essays under the title of Digressions and Quotations. The plates represent the highest type of what is known as the three-color process and are successful to a re-

markable degree. Where they are not quite satisfactory it is owing to the fact that the forms figured are so closely related as to make any process insufficient. The majority of the figures leave nothing to be desired, as they are close to perfection. The work is excellently done, and the author is to be sincerely congratulated. This book will do more to stimulate an interest in these insects than anything heretofore printed. The works of the past that were of any value had a prohibitive price, but on looking over this work one is amazed at what is given for such a comparatively small money outlay. The young and the old can find any amount of interest in such a book, and we can heartily recommend it to all lovers of the beautiful in Nature. It is intended as a popular work, but still has a scientific interest, as many types are accurately figured, and it will not be out of place in any scientific library. We can hardly say too much in its praise, and can find but few faults, and in a work of its magnitude it is surprising there are not more that might be criticised. On page 80 the caterpillar is spoken of as emerging from the chrysalis—a typographical error of small moment. The locality of *Argynnis hippolyta* is not given. Figures 14 and 15, on plate 46, represent as male and female two widely different species. Figure 39, on plate 47, is not *pocahontas*, but the normal female of *Pam. zabulon*. Plate 47, fig 40 is not *brettus* but *phylæus*. Plate 48, fig. 15 is not *Thanaos horatius* ♂ but the ♀ of a different species. We think as a book for the tyro the time of seasonal appearance of the species should have been given. The author has slighted his descriptions on account of the perfection of the plates, but where sexes differ and under sides are not shown more descriptive matter would have been an advantage. If the specimens had been properly and symmetrically expanded, they would have looked much better to the eye of the lepidopterist. Our space is too limited to say more of this beautiful book. We hope it will find a place in every library. H. S.

THE BUTTERFLIES.

After Coppee. "Pour la Couronne."

At sixteen years she knew no care;
How could she, sweet and pure as light?
And there pursued her everywhere
Butterflies all white.

A lover looked. She dropped her eyes,
That glowed like pansies wet with dew,
And lo! there came from out the skies
Butterflies all blue.

Before she guessed, her heart was gone;
The tale of love was swiftly told.
And all about her wheeled and shone
Butterflies of gold.

Then he forsook her one sad morn,
She wept and sobbed, "O, love, come back."
There only came to her forlorn
Butterflies all black.

JOHN DAVISON.

DOINGS OF SOCIETIES.

At the November meeting of the Feldman Collecting Social, held at the residence of Mr. H. W. Wenzel, 1523 South 13th street, eleven members were present. On behalf of Mr. Laurent, Mr. Wenzel exhibited a collection of Lepidoptera made by himself and Mr. E. Wenzel at North Mountain, Pa., in July, calling particular attention to *Endropia serrata*, which had been taken abundantly; also to *Plusia æreoides* and *P. u-aureum*, which were probably not before recorded from Pennsylvania. Among the unidentified material Dr. Skinner called attention to a specimen of the rare *Plusia formosa*.

Mr. H. Wenzel reported the capture of *Casnonia ludoviciana* and other interesting species of Coleoptera, in New Jersey, on October 12th. The same speaker referred to the forthcoming new edition of Smith's Catalogue of the Insects of New Jersey, and to the diversity of opinion of authorities as to the abundance or rarity of certain species in the old work, and suggested the advisability of having more consistent data in the new work. Discussed by Messrs. Johnson, Bland, Fox, H. Wenzel and Castle. Mr. Johnson spoke of the extension of the Carolinian fauna into New Jersey. He had collected ninety-seven species of Syrphidæ in that State, of which only ten were Southern species; of the Tachinidæ ninety-six species, of which twenty-seven may be said to be Southern. Five out of forty-eight species of Tabanidæ had not been recorded from so far north, while out of thirty-four species of Bombylidæ only six are Southern. He did not think the Diptera formed as good a basis for indicating faunal limits as did the Coleoptera or some of the other orders of insects. Mr. H. Wenzel exhibited a species of *Lixus*, from Anglesea, N. J., taken in August, which he had only before known from Louisiana. The absence of *Mantis carolina* from the fauna of Southern New Jersey was commented on by Mr. Seiss. Dr. Castle stated he had received specimens of the *Mantis* from Chester county, Pa.

WM. J. FOX, Secretary.

A meeting of the Entomological Section of the Academy of Natural Sciences was held November 17th, Mr. C. S. Welles, Director, presiding. Dr. Calvert stated that he had recently mounted some specimens of the San José scale (*Aspidiotus per-*

niciosus), and presented them for examination. He said the specimens fairly represented the figures in the current literature on the subject. The specimens had been boiled in a solution of caustic potash, which had removed all but the chitin. Twigs of apple, showing the scale in position, were also shown, as well as those of *Chionaspis furfurus*. Dr. Skinner exhibited a living specimen of *Ranatra fusca*, and also two species of *Erebia* from Northern Alaska. The latter were in poor condition and looked much alike, but, on careful examination, the differences were marked, the species being *E. rossii* and *E. disa* var. *mancinus*. The former seldom has but two ocelli and the latter three or four. *Mancinus* also has a small white spot on the middle of the edge of the band which crosses the centre of the under side of the inferiors. Mr. Liebeck exhibited an interesting conglomerate cocoon of *Callosamia cynthia*. Three well-made cocoons were enclosed in a bag of silk, the whole looking like one large pear-shaped cocoon. Dr. Skinner exhibited his new Synonymic Catalogue of American Rhopolocera. The body of the catalogue, exclusive of the index, bibliography, list of authors, etc., consists of ninety-nine pages. There are 645 species listed, and each reference is a separate line, thus greatly helping the eye. Where a species is found outside of our faunal limit the distribution is given. A few species listed as valid in former lists have been placed in the synonymy, but only in cases where it seemed well warranted. It is hoped the catalogue may prove useful.

Mr. Lancaster Thomas exhibited a female specimen of *Grapta comma*, captured at Cranberry, N. C., which was very dark on the under side. He had taken two specimens, one now being in the collection of Dr. Skinner. He also mentioned seeing *Callidryas eubule* flying in one direction, a specimen passing every five or ten minutes. He also saw *Junonia cœnia*, flying South, in the same way, in pairs. In both cases the butterflies were going against the wind. Mr. Johnson said he had seen *Pieris monuste* in immense numbers at St. Augustine, Fla., going North, for three days. Same speaker had seen *Agraulis vanillæ*, going South, in Florida, in September, when the passion-vine, their food plant, further North, was withering, but in Florida was still fresh.

HENRY SKINNER, M. D., Recorder.

A regular meeting was held by the Newark Entomological Society at Turn Hall, Sunday, December 11th, at 4 p. m., with President Scleckser in the chair and the following members present: Messrs. Angleman, Kircher, Broadwell, Seille, Herpers, Bischoff, Kemp, Bunsow, Weidt, Buchholz and Prof. John B. Smith.

The genus *Datana* was selected for study and identification for the following meeting.

Mr. Kemp gave a list of captures made in one locality, at Clementon, N. J., for three successive seasons, as follows: May 10, 1896, *Pamphila metea* ♂ was abundant; ♀ not so plentiful. Specimens were fresh. *Syneda graphica*, none seen. *Epirranthis obfirmaria*, none seen. May 9, 1897, *P. metea* ♂ abundant; ♀ more scarce than the preceding year. *S. graphica* very abundant; mostly in fresh condition. *E. obfirmaria*, none seen. May 10, 1898, *P. metea*, one ♂ taken; *S. graphica*, none seen; *E. obfirmaria*, abundant and in good condition, but difficult to capture on account of their keeping so close to the underbrush.

Mr. Weidt remarked that an early spring one season and a late one the following would make a difference of two or three weeks in the appearance of certain broods of insects.

Mr. Kemp mentioned that he found *Cincindela consentanea* moderately abundant on very warm days all through September, in 1897, at Atco, N. J.

Mr. Weidt remarked that he noticed ants preying on young larva of *Sphinx luscitiosa*, and he added that he seldom found eggs on bushes that were infested with ants.

The following officers were elected:

President, Edward Bischoff.

Vice President, S. T. Kemp.

Treasurer, Simon Seib (re-elected).

Secretary, A. J. Weidt (re-elected).

Librarian, John Angelman (re-elected).

Mr. Bischoff and Mr. Weidt volunteered to act as curators for Coleoptera and Lepidoptera, respectively, for the following year.

A. J. WEIDT, Secretary.

EXCHANGES

NOT EXCEEDING THREE LINES FREE TO SUBSCRIBERS.

☞ These notices are continued as long as our limited space will allow; the new ones are added at the end of the column, and only when necessary those at the top (being longest in) are discontinued.

Identification of Insects [Imagos] for Subscribers.

Specimens will be named under the following conditions: 1st, The number of species to be LIMITED TO TWENTY-FIVE for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a two-cent stamp with all insects for return of names. PLEASE PUT DATE OF CAPTURE AND EXACT LOCALITY ON EACH SPECIMEN. Before sending insects for identification, read page 41, Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

WANTED.—Live pupæ of *Luna. Io, Imperialis, Regalis*, etc., will exchange bird skins, eggs, stuffed birds, etc.—John Clayton, Lincoln, Me.

FOR EXCHANGE.—Insect Life, vol. i. 1-2; vol. iii, 1-6. Price, 15c. each.—Eugene R. Fischer, 2707 Winnebago St., St. Louis, Mo.

LEPIDOPTERA.—Exchange wanted from all other parts of the United States and Canada for specimens from northeastern Pennsylvania. Correspondence solicited.—Alfred E. Lister, 921 Vine St., Scranton, Pa.

LONGICORN BEETLES and Parnassius and Pierids in papers wanted in exchange for about 150 species of Orthoptera and Papilios (my own collection), many rarities included.—John Watson, 94 George St., Alexandra Park, Manchester, England.

ODONATA.—I want dragonflies from any locality in America, and will exchange for same. Will collect in any order in this region for cash.—M. J. Elrod, University of Montana, Missoula, Mont.

LEPIDOPTERA.—Exchange desired with collectors everywhere. I offer Lepidoptera, and will also collect in other orders. Send lists.—Ernest N. Laing, Essex, Ontario, Canada.

WANTED.—Tingitidæ especially from the United States. All specimens sent for determination will be returned.—F. M. McElfresh, Urbana, Ill.

TIPULIDÆ.—Will exchange in any order for North American Tipulidæ.—C. V. Piper, Agricultural College, Pullman, Wash.

AM open to collect any order that is required this season to be found in Colorado. Correspondence solicited.—Ernest J. Oslar, 1853 Marion St., Denver, Col.

LEPIDOPTERA.—I have a very large number of rare species of American butterflies in duplicate. Liberal exchange given for desiderata.—Dr. Henry Skinner, Acad. Nat. Sci., 1900 Race St., Phila., Pa.

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